EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Richard Treanor on 1/22/10.

The application has been amended as follows:

IN THE CLAIMS:

Claim 17 (Currently Amended): A process for preparing one or more iodinated organic substances having a molecular mass of less than 2000 (substances (S)) using:

(A) at least one free-radical-generating substance chosen from peroxides, diazo compounds, dialkyldiphenylalkanes, substances derived from tetraphenylethane, boranes and iniferter substances comprising at least one thiuram disulphide group,

(B) at least one organic substance comprising at least one ethylenic double bond, capable of adding a free radical to its ethylenic double bond,

(C) molecular iodine,

which comprises:

(1) introducing at least a fraction of (A), at least a fraction of (B) and at least a fraction of (C) into a reactor, then

(2) causing the contents of the reactor to react, while introducing therein the possible remainder of (A), the possible remainder of (B) and the possible remainder of (C), until the reactor comprises a mixture comprising one or more substances (S) [mixture (M)], and then

either the contents of the reactor are caused to react until the quantity of (B) consumed by the reaction no longer changes (variant (1)), or the reaction in progress is stopped (variant (2)), to produce said one or more iodinated organic substances having a molecular mass of less than 2000,

wherein in variant (1), the number of moles of (C) introduced into the reactor expressed relative to the number of moles of (A) introduced into the reactor is greater than or equal to 90% and less than 200% and the number of moles of (C) introduced into the reactor expressed relative to the number of moles of (B) introduced into the reactor is more than 0.5% and less than 200%, ~~and~~

wherein in variant (2) the number of moles of (C) introduced into the reactor expressed relative to the number of moles of (A) introduced into the reactor is greater than or equal to 20% and less than 100% and the number of moles of (C) introduced into the reactor expressed relative to the number of moles (B) introduced into the reactor is greater than or equal to 0.01% and less than 5%, and

wherein the at least one organic substance comprising at least one ethylenic double bond, capable of adding a free radical to its ethylenic double bond, is at least one compound corresponding to the formula:

$$C\Psi_2 = C\Psi\Xi$$

where

- the Ψ symbols represent, independently of each other and of Ξ, (i) a hydrogen atom, (ii) a halogen atom other than iodine, or (iii) a linear or branched C1-C20 alkyl group;

- Ξ represents (i) a halogen atom other than iodine, (ii) a phenyl group optionally substituted with one or more atoms chosen from halogen atoms other than iodine and C_1-C_8 alkyl groups, (iii) –O-C(=O)-Ω, (iv) a nitrile group, (v) –C(=O)-O-Ω or (vi)

–C(=O)-N-Ω; and

- Ω represents (i) a hydrogen atom, or (ii) a saturated or ethylenically unsaturated or aromatic C_1-C_{20} hydrocarbon group.

Claim 45 has been canceled.

Claim 46 (Currently Amended): ~~The process according to Claim 17,~~ A process for preparing one or more iodinated organic substances having a molecular mass of less than 2000 (substances (S)) using:

(A) at least one free-radical-generating substance chosen from peroxides, diazo compounds, dialkyldiphenylalkanes, substances derived from tetraphenylethane, boranes and iniferter substances comprising at least one thiuram disulphide group,

(B) at least one organic substance comprising at least one ethylenic double bond, capable of adding a free radical to its ethylenic double bond,

(C) molecular iodine,

which comprises:

(1) introducing at least a fraction of (A), at least a fraction of (B) and at least a fraction of (C) into a reactor, then

(2) causing the contents of the reactor to react, while introducing therein the possible remainder of (A), the possible remainder of (B) and the possible remainder of (C), until the reactor comprises a mixture comprising one or more substances (S) [mixture (M)], and then

either the contents of the reactor are caused to react until the quantity of (B) consumed by the reaction no longer changes (variant (1)), or the reaction in progress is stopped (variant (2)), to produce said one or more iodinated organic substances having a molecular mass of less than 2000,

wherein in variant (1), the number of moles of (C) introduced into the reactor expressed relative to the number of moles of (A) introduced into the reactor is greater than or equal to 90% and less than 200% and the number of moles of (C)

introduced into the reactor expressed relative to the number of moles of (B) introduced into the reactor is more than 0.5% and less than 200%,

wherein in variant (2) the number of moles of (C) introduced into the reactor expressed relative to the number of moles of (A) introduced into the reactor is greater than or equal to 20% and less than 100% and the number of moles of (C) introduced into the reactor expressed relative to the number of moles (B) introduced into the reactor is greater than or equal to 0.01% and less than 5%, and

wherein the at least one organic substance comprising at least one ethylenic double bond, capable of adding a free radical to its ethylenic double bond, is at least one of vinyl chloride, vinylidene chloride, trichloroethylene, chlorotrifluoroethylene, vinyl fluoride, vinylidene fluoride, trifluoroethylene, tetrafluoroethylene, hexafluoropropylene, styrene, vinyl acetate, acrylic acid, methyl acrylate, ethyl acrylate, n-butyl acrylate, 2-ethylhexyl acrylate, methacrylic acid, methyl methacrylate, n-butyl methacrylate, ethylene, propylene and butadiene.

Claim 47 (New): The process according to Claim 46, wherein the substance(s) (S) have a molecular mass of less than 1000.

Claim 48 (New): The process according to Claim 46, wherein the substance(s) (S) have a number-average molecular mass of less than 500.

Claim 49 (New): The process according to Claim 46, comprising variant (2), wherein the reaction in progress is stopped when the color of the contents of the reactor changes from a dark color to a light color.

Claim 50 (New): The process according to Claim 46, comprising variant (1).

Claim 51 (New): The process according to Claim 46, comprising variant (2).

Claim 52 (New): The process according to Claim 46, wherein all of each of (A), (B) and (C) are introduced into the reactor in (1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yevgeny Valenrod whose telephone number is 571-272-9049. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Sullivan can be reached on 571-272-0779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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